

Appln. No. 10/707,390
Docket No. PES-D-02-038/PES-0183

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REMARKS / ARGUMENTS

Status of Claims

Claims 1-7, 9-27 and 31-33 are pending in the application. Claims 1-6, 9-15, 31 and 33 stand rejected. Claims 7, 16-27 and 32 are allowed. Applicant has canceled Claim 10 and has amended Claim 1 to incorporate all of the limitations of Claim 10, leaving Claims 1-7, 9, 11-27 and 31-33 for consideration upon entry of the present Amendment.

Applicant respectfully submits that the rejections under 35 U.S.C. §102(b) and 35 U.S.C. §103(a) have been traversed, that no new matter has been entered, and that the application is in condition for allowance.

Rejections Under 35 U.S.C. §102(b)

Claims 1, 13-15 and 31 stand rejected under 35 U.S.C. §102(b) as being anticipated by Fujita (U.S. Publication No. 2002/0148502, hereinafter Fujita).

Applicant traverses this rejection for the following reasons.

Applicant respectfully submits that “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, *in a single prior art reference.*” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). Moreover, “[t]he identical invention must be shown in as complete detail as is contained in the *** claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Furthermore, the single source must disclose all of the claimed elements “arranged as in the claim.” *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984). Missing elements may not be supplied by the knowledge of one skilled in the art or the disclosure of another reference. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 780, 227 U.S.P.Q. 773, 777 (Fed. Cir. 1985).

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Applicant has canceled Claim 10 and has amended Claim 1 to now include all of the limitations of Claim 10. In view of Fujita not being applied to reject Claim 10 as being anticipated, Applicant submits that the rejections under 35 U.S.C. §102(b) have been rendered moot.

In view of the amendment, Applicant submits that Fujita does not disclose each and every element of the claimed invention arranged as claimed and therefore cannot be anticipatory. Accordingly, Applicant respectfully submits that the Examiner's rejection under 35 U.S.C. §102(b) has been overcome, and requests that the Examiner reconsider and withdraw of this rejection.

Rejections Under 35 U.S.C. §103(a)

Claim 2 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Fujita in view of Agricola et al. (U.S. Publication No. 2002/0134342, hereinafter Agricola).

Claim 3 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Fujita in view of Takeda et al. (U.S. Publication No. 2002/0092575, hereinafter Takeda).

Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita in view of Belcher, Jr. (U.S. Patent No. 2,793,813, hereinafter Belcher, Jr.).

Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita.

Claims 6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita in view of Petite et al. (U. S. Publication No. 2002/0125998, hereinafter Petite.)

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita in view of Watson (U.S. Patent No. 3,322,135, hereinafter Watson).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita-Agricola as applied to Claim 2 above, and further in view of Takeda.

Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita in view of Dowdall (U.S. Patent No. 4,958,659, hereinafter Dowdall).

Claims 1, 10, 14 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over McJones (U.S. Patent No. 3,719, 196, hereinafter McJones), in view of Fujita.

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Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over McJones/Fujita as applied to 1 above, and further in view of Agricola.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over McJones/Fujita as applied to Claim 1 above, and further in view of Takeda.

Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over McJones/Fujita as applied to Claim 1 above, and further in view of Belcher, Jr.

Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over McJones/Fujita.

Claims 6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over McJones/Fujita as applied to Claim 1 above, and further in view of Petite.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over McJones/Fujita as applied to Claim 1 above, and further in view of Watson.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over McJones-Fujita-Agricola as applied to Claim 2 above, and further in view of Takeda.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over McJones/Fujita as applied to Claim 1 above, and further in view of Fujita.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over McJones/Fujita as applied to Claim 1 above, and further in view of Fujita.

Applicant overcomes these rejections for the following reasons.

Applicant respectfully submits that the obviousness rejection based on the References is improper as the References fail to teach or suggest each and every element of the instant invention in such a manner as to perform as the claimed invention performs. For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). The Examiner must meet the burden of establishing that all elements of the invention are taught or suggested in the prior art. MPEP §2143.03.

Applicant has canceled Claim 10 and has amended Claim 1 to incorporate all of the limitations of Claim 10, such that Claim 1 now recites, *inter alia*,

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“...a plurality of control modules in fluid communication with the manifold, wherein each control module comprises an actuatable valve in fluid communication with an associated gas storage device; and

a power source in electrical communication with each of the actuatable valves, wherein the power source has sufficient power output to actuate only one of the actuatable valves at a time to an actuated state and insufficient power output to simultaneously actuate more than one of the actuatable valves to an actuated state;

wherein *each of the actuatable valves comprises a circuit comprising a switch in electrical communication with the actuatable valve and the power source, wherein each of the circuits are in series.*”

Dependent claims inherit all of the limitations of the respective parent claim and any intervening claim.

Here, Applicant is claiming a plurality of control modules, each having an actuatable valve, each actuatable valve having a circuit with a switch in electrical communication with the actuatable valve and the power source, and each of the circuits being electrically connected in series.

By electrically connecting the circuits in series, the switches are necessarily also connected in series, and each switch is in electrical communication with its respective actuatable valve and the power source. By electrically connecting the switches in series, the power source sees a higher load impedance when more than one switch attempts to actuate its respective actuatable valve. By properly matching the power available from the power source to the impedance of the actuatable valves, the power source is sized such that “the power source has sufficient power output to actuate only one of the actuatable valves at a time to an actuated state and insufficient power output to simultaneously actuate more than one of the actuatable valves to an actuated state”, as claimed.

In alleging obviousness of Claim 10, the Examiner acknowledges that “McJones does not disclose a power source in electrical communication with each of the actuatable valves, that Fujita discloses the use of a power source for controlling the actuatable valves

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and also that the valves are electrical", and alleges that "McJones discloses the serial circuits and modifying it in view of Fujita would have electrical circuits in series." Final Action Paper No. 20070502, page 7.

Applicant respectfully disagrees that the combination of McJones and Fujita teach each and every element of the claimed invention arranged so as to perform as the claimed invention performs.

On page 2 of the instant office action, the Examiner alleges that Fujita's "power source is 'configured to' prevent simultaneous actuation of the multiple valves because it is capable of only actuating one valve at a time."

On page 13 of the instant office action, the Examiner remarks that Fujita's "power source is 'configured to prevent...' because there are separate actuation signals sent to each of the valves (see Fig. 1) and there is a mode in which the valves are actuated one at a time which inherently prevents the actuation of the others."

From the foregoing analysis made by the Examiner, it appears to Applicant that the Examiner is relying on Fujita's separate actuation signals sent to each valve (Figure 1 depicting separate actuation signals from control unit 60 to valve actuators 43, 45, 47, 49) to allege a teaching of the claimed "the power source has sufficient power output to actuate only one of the actuatable valves at a time to an actuated state and insufficient power output to simultaneously actuate more than one of the actuatable valves to an actuated state".

Applicant agrees with the Examiner that Fujita's Figure 1 shows separate actuation signals sent to each valve for the purpose of controlling the opening of only one valve at a time, which Applicant views as being circuits in parallel (or altogether separate), but most definitely not in series. As such, Applicant finds Fujita to be completely absent any disclosure or teaching of having a plurality of switch circuits arranged in series *for the purpose of controlling the opening of only one valve at a time*. To cure this deficiency, the Examiner then applies McJones to teach "the serial circuits and modifying it in view of Fujita would have electrical circuits in series."

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However, once the parallel circuit arrangement of Fujita is destroyed by the series connection now applied via McJones, the Examiner has failed to establish how the references teach a combination that is capable of controlling the opening of only one valve at a time, since this functionality came from Figure 1 of Fujita (now destroyed by the Examiner's modification to a series connection).

As such, Applicant submits that even if the combination of references were to be combined as alleged by the Examiner, the combination is still missing elements of the claimed invention arranged so as to perform as the claimed invention performs, and the combination is completely lacking any expectation of success in performing as the claimed invention performs.

In view of the foregoing, Applicant submits that the References fail to teach or suggest each and every element of the claimed invention and are therefore wholly inadequate in their teaching of the claimed invention as a whole, fail to motivate one skilled in the art to do what the patent Applicant has done, fail to offer any reasonable expectation of success in combining the References to perform as the claimed invention performs, and discloses a substantially different invention from the claimed invention, and therefore cannot properly be used to establish a *prima facie* case of obviousness. Accordingly, Applicant respectfully requests reconsideration and withdrawal of all rejections under 35 U.S.C. §103(a), which Applicant considers to be overcome.

Applicant has amended the claims for presentation in a better form for appeal. The claim amendments should only require a cursory review by the Examiner as they include language presented in earlier examined claims.

In light of the foregoing remarks and amendments, Applicant respectfully submits that the proposed amendments and arguments comply with 37 C.F.R. §1.116 and should therefore be entered, and with their entry that the Examiner's rejections under 35 U.S.C. §102(b) and 35 U.S.C. §103(a) have been traversed, and that the application is now in condition for allowance. Such action is therefore respectfully requested.

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If a communication with Applicant's Attorneys would assist in advancing this case to allowance, the Examiner is cordially invited to contact the undersigned so that any such issues may be promptly resolved.

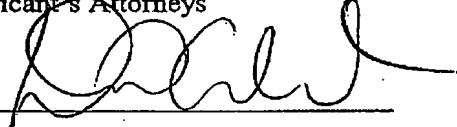
The Commissioner is hereby authorized to charge any additional fees that may be required for this amendment, or credit any overpayment, to Deposit Account No. 06-1130.

In the event that an extension of time is required, or may be required in addition to that requested in a petition for extension of time, the Commissioner is requested to grant a petition for that extension of time that is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to the above-identified Deposit Account.

Respectfully submitted,

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